

What is claimed is:

1. An Integrated Communication System (ICS) with fail-over serial data connectivity comprising:
 - a chassis including a System Switch Processor (SSP) for providing connectivity to a plurality of slots;
 - 5 a Serial Alarm Processor (SAP) operatively coupled to said ICS through one of said slots, said SAP further including at least one serial port for providing serial data connectivity;
 - a Primary Single Board Computer (SBC) and at least one secondary SBC disposed in said slots; and
 - 10 wherein said is configured to pass control of serial data connectivity from said Primary SBC to one of said at least one secondary SBC in the event of the failure of said Primary SBC.
2. The ICS of claim 1, wherein said SAP is further configured to monitor the status of the ICS and provide real-time data to said SBC.
3. The ICS of claim 1, wherein said SAP is further configured to monitor the operational status of each component of said ICS, and remotely alert system administrators of any environmental, functional, or operational problems detected within said ICS.
- 20 4. The ICS of claim 1, wherein said SAP further includes sensor circuitry for the monitoring of system functions.
5. The ICS of claim 5, wherein fault management is facilitated utilizing said sensor circuitry.

6. The ICS of claim 1, wherein said SBC further includes a Serial Line Protocol
Module ("SLPM") for implementing Serial Line Protocol.

7. The ICS of claim 6, wherein said SLPM provides control of said at least one serial
ports.

5 8. The ICS of claim 7, wherein said SLPM is further configured to multiplex
multiple sessions between said SBCs and said SAP.

9. The ICS of claim 1, wherein said Primary SBC provides control of serial data
connectivity in the ICS.

10. A method for fail-over serial data connectivity in a Integrated Communication
System including at least two Single Board Computers (SBC) comprising:
10 designating one of said SBCs as a Primary SBC;
connecting serial data to said Primary SBC; and
connecting serial data to one of the other at least two SBCs in the event of the
failure of said Primary SBC.

15 11. The method of claim 10, further including the acts of:
determining, by said Primary SBC whether it is capable of performing as a
Primary SBC; and
issuing, by said Primary SBC, an escape sequence.

12. The method of claim 11, further including the acts of:
20 receiving, by said SAP, said escape sequence;
assigning, by said SAP, a new Primary SBC; and
passing, by said SAP, serial connectivity control to said new Primary SBC.

13. The method of claim 11, further including the acts of marking the header of a
packet with said escape sequence.

14. The method of claim 13, further including the act of passing, by said SAP, serial connectivity control to a remote 3rd party.
15. A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for fail-over serial data connectivity in a Integrated Communication System including at least two Single Board Computers (SBC), said method comprising:
 - designating one of said SBCs as a Primary SBC;
 - connecting serial data to said Primary SBC; and
 - connecting serial data to one of the other at least two SBCs in the event of the failure of said Primary SBC.
16. The program storage device of claim 15, further including the acts of:
 - determining, by said Primary SBC whether it is capable of performing as a Primary SBC; and
 - issuing, by said Primary SBC, an escape sequence.
17. The program storage device of claim 16, further including the acts of:
 - receiving, by said SAP, said escape sequence;
 - assigning, by said SAP, a new Primary SBC; and
 - passing, by said SAP, serial connectivity control to said new Primary SBC.
18. The program storage device of claim 16, further including the acts of marking the header of a packet with said escape sequence.
19. The program storage device of claim 18, further including the act of passing, by said SAP, serial connectivity control to a remote 3rd party.
20. An apparatus for fail-over serial data connectivity in a Integrated Communication System including at least two Single Board Computers (SBC) comprising:

means for designating one of said SBCs as a Primary SBC;
means for connecting serial data to said Primary SBC; and
means for connecting serial data to one of the other at least two SBCs in the
event of the failure of said Primary SBC.

5 21. The apparatus of claim 20, further including:

means for determining whether said Primary SBC is capable of performing as
a Primary SBC; and
means for issuing an escape sequence.

22. The apparatus of claim 21, further including:

10 means for receiving said escape sequence;
means for assigning a new Primary SBC; and
means for passing serial connectivity control to said new Primary SBC.

23. The apparatus of claim 21, further including means for marking the header of a
packet with said escape sequence.

15 24. The apparatus of claim 23, further including means for passing serial
connectivity control to a remote 3rd party.

25. A machine-readable medium including a packet containing an indication for
passing serial connectivity control to a remote 3rd party.